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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,688	02/03/2005	Shuichi Matsumura	122627	8515
25944	7590	02/23/2007		
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER LILLING, HERBERT J	
			ART UNIT 1657	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
31 DAYS		02/23/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/523,688

Applicant(s)

MATSUMURA, SHUICHI

Examiner

HERBERT J. LILLING

Art Unit

1657

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Aug 03, 2005 (Prelim Amd).
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-20 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

1. Receipt is acknowledged of a preliminary amendment filed August 03, 2005 and a prior art information statement filed February 03, 2005 for this application, which is a 371 of PCT/JP03/09676, filed July 30, 2003.

2. Claims 1-20 are present in this application.

3. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-10, drawn to a depolymerizing process of polylactic acid, wherein the polylactic acid is depolymerized in the presence of a hydrolase and producing a re-polymerizable oligomer.

Group II, claim(s) 11-20, drawn to a producing process of polylactic acid, wherein an oligomer of lactic acid is polymerized in the presence of a hydrolase.

4. The process of Group I is drawn to a process for the formation of an oligomer which process is distinct from that of Group II process for the formation of a polymer of an oligomer.

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art due to their recognized divergent subject matter which requires totally different computerized search strategies for each of the inventions drawn to different products that are formed, restriction for examination purposes as indicated is proper.

The starting substrates for each of the processes is patently distinct from each other as well as the final product formed from the processes are totally different from each other which inventions or groups of inventions are not so linked as to form a single general inventive concept under PCT Rule 13.1.

5. This application contains claims directed to the following patentably distinct species:

A. Whereby the polylactic acid is depolymerized in the presence of a hydrolase in:

- a. an organic solvent,
- b. a supercritical fluid,
- c. other solvent or fluid – please specify,
- d. combination of any of the above- please specify,
- e. the process can be carried out in any of the above.

B. Whereby the polylactic acid is

- a. poly(L-lactic acid),
- b. poly(DL-lactic acid),
- c. polylactic acid copolymer –please specify the copolymer.
- d. other polylactic acid,
- e. combination of any of the above,
- f. the process can be carried out by any polylactic acid homopolymer or copolymer.

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C. Whereby the hydrolase is selected from:

- a. lipase,
- b. other hydrolase,
- c. combination of above – please specify the combination.

D. Whereby the process for the production of copolymers is from one or more monomers or oligomers selected from:

- a. cyclic lactone monomers or cyclic lactone oligomers,
- b. cyclic or linear carbonate monomers or oligomers,
- d. cyclic or linear ester oligomers,
- e. hydroxy acids,
- f. hydroxy acid esters.
- g. combination of the above – please specify,
- h. other monomers or oligomers – please specify.

E. Whereby the polymerization is:

- a. in the presence of a polymerization catalyst – please specify the catalyst.
- b. in the presence of any polymerization catalyst.
- c. takes place in the absence or presence of any catalyst.
- d. other – please specify.

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F. Whereby producing process of polylactic acid in the presence of a catalyst, wherein one or more monomers or oligomers is selected from:

- a. cyclic lactone monomers or oligomers,
- b. cyclic carbonate monomers or oligomers,
- c. other monomer or oligomers – please specify,
- d. combination of the above – please specify the combination.

6. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claim is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species.

MPEP § 809.02(a).

7. Applicant is advised that the reply to this requirement to be complete must include (i) an election of an invention and an election of species as noted by the above paragraph that includes one species from A – F to be examined even though the requirement be traversed (37 CFR 1.143) and **(ii) identification of the claims encompassing the elected invention.**

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

It is strongly suggested that if Applicant requires as clarification for the election of species as well as the requirement **(ii) identification of the claims encompassing the elected invention,** this Examiner will assist in any way to expedite the prosecution of this application in order to avoid any misinterpretations for which claims are within the scope of the elected Invention based on the election of species.

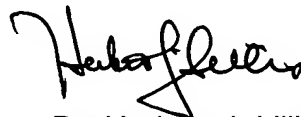
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8. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Lilling whose telephone number is 571-272-0918 and Fax Number is **571-273-8300**, or SPE Jon Weber whose telephone number is 571-272-0925. Examiner can be reached Monday-Friday from about 7:30 A.M. to about 7:00 P.M. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

H.J.Lilling: HJL  
(571) 272-0918  
Art Unit **1657**  
February 17, 2007



Dr. Herbert J. Lilling  
Primary Examiner  
Group 1600 Art Unit 1657